

a. $23.7 \text{ mg} = \underline{0.237} \text{ dg}$

$$23.7 \cancel{\text{g}} \times \left(\frac{1 \cancel{\text{dg}}}{10^2 \cancel{\text{g}}} \right) \frac{10^{-1}}{10^{-3}}$$

$$23.7 \times 10^{-2}$$

$$2.37 \times 10^{-1} \text{ dg}$$

c. $92.67 \text{ cl} = \underline{9.267 \times 10^{-2}} \text{ dal}$

$$= 92.67 \cancel{\text{cl}} \times \left(\frac{1 \cancel{\text{dal}}}{10^3 \cancel{\text{cl}}} \right) \frac{10^{-1}}{10^{-2}}$$

$$= 92.67 \times 10^{-3}$$

$$= \underline{9.267 \times 10^{-2} \text{ dal}}$$

e. $76214 \text{ } \mu\text{m} = \underline{0.76214} \text{ dm}$

$$76214 \mu\text{m} \times \left(\frac{1 \text{ dm}}{10^5 \mu\text{m}} \right) \frac{10^{-1}}{10^{-6}}$$

$$76214 \times 10^{-5}$$

$$= \underline{7.6214 \times 10^{-1}}$$

g. $45.8 \text{ dm} = \underline{4.58 \times 10^9} \text{ nm}$

$$= 45.8 \cancel{\text{dm}} \times \left(\frac{10^8 \text{ nm}}{1 \cancel{\text{dm}}} \right) \frac{10^{-1}}{10^{-1}}$$

$$= 45.8 \times 10^8$$

$$= \underline{4.58 \times 10^9 \text{ nm}}$$

i. 6.4 days = 9216 min

$$\begin{aligned}
 &= 6.4 \cancel{\text{day}} \times \left(\frac{60 \times 24 \text{ min}}{1 \cancel{\text{day}}} \right) \\
 &= 6.4 \times 60 \times 24 \text{ min} \\
 &= \underline{9216 \text{ min}}
 \end{aligned}$$

k. $82.5 \text{ cm}^2 = \underline{8.25 \times 10^{-3}} \text{ m}^2$

$$\begin{aligned}
 &82.5 \text{ cm}^2 \times \left(\frac{1 \text{ m}}{10^2 \text{ cm}} \right)^2 \\
 &= 82.5 \cancel{\text{cm}^2} \times \left(\frac{1 \text{ m}^2}{10^4 \cancel{\text{cm}^2}} \right) \\
 &= 82.5 \times 10^{-4} \\
 &= 8.25 \times 10^{-3} \text{ m}^2
 \end{aligned}$$

m. $0.0025 \text{ km}^2 = \underline{2.5 \times 10^5} \text{ dm}^2$

$$\begin{aligned}
 &0.0025 \text{ km}^2 \times \left(\frac{10^4 \text{ dm}}{1 \text{ km}} \right)^2 \\
 &0.0025 \cancel{\text{km}^2} \times \left(\frac{10^8 \text{ dm}^2}{1 \cancel{\text{km}^2}} \right) \\
 &= 0.0025 \times 10^8 \text{ dm}^2 \\
 &\quad \quad \quad \hookrightarrow \\
 &= 2.5 \times 10^5 \text{ dm}^2
 \end{aligned}$$

o. $35.7 \text{ dam}^2 = \underline{3.57 \times 10^5} \text{ dm}^2$

$$\begin{aligned}
 &= 35.7 \text{ dam}^2 \times \left(\frac{10^2 \text{ dm}}{1 \text{ dam}} \right)^2 \\
 &= 35.7 \cancel{\text{dam}^2} \times \left(\frac{10^4 \text{ dm}^2}{1 \cancel{\text{dam}^2}} \right) \\
 &= 357000 \text{ dm}^2
 \end{aligned}$$

q. $185 \text{ hm}^3 = \underline{1.85 \times 10^5} \text{ dam}^3$

$$185 \text{ hm}^3 \times \left(\frac{10^1 \text{ dam}}{1 \text{ hm}} \right)^3$$

$$185 \cancel{\text{hm}^3} \times \left(\frac{10^3 \text{ dam}^3}{1 \cancel{\text{hm}^3}} \right)$$

$$185000 \text{ dam}^3$$

s. $1340000 \text{ } \mu\text{m}^3 = \underline{1.34 \times 10^{-6}} \text{ cm}^3$

$$1340000 \mu\text{m}^3 \times \left(\frac{1 \text{ cm}}{10^4 \mu\text{m}} \right)^3$$

$$1340000 \cancel{\mu\text{m}^3} \times \left(\frac{1 \text{ cm}^3}{10^{12} \cancel{\mu\text{m}^3}} \right)$$

$$1340000 \times 10^{-12} \text{ cm}^3$$

$$\underline{1.34 \times 10^{-6} \text{ cm}^3}$$

u. $14 \text{ m/s} = \underline{50.4} \text{ km/h}$

$$14 \cancel{\text{m}} \times \left(\frac{1 \text{ km}}{1000 \cancel{\text{m}}} \right) \times \left(\frac{60 \times 60 \cancel{\text{s}}}{1 \text{ h}} \right)$$

$$\frac{14 \times 60 \times 60}{1000} \text{ km/h} = 50.4$$